

IN THE CLAIMS

1 - 59. (Canceled)

60. (Currently Amended) A method of forming a semiconductor structure, the method comprising:

forming a first conductive layer;

forming an insulation layer abutting the first conductive layer;

forming a second conductive layer abutting the insulation layer; [[and]]

forming an inhibiting layer abutting the second conductive layer, wherein the inhibiting layer inhibits formation of an undesired oxidation compound so as to enhance an ohmic contact;
and

forming a diffusion barrier layer abutting the inhibiting layer.

61. (Original) The method of claim 60, wherein forming the inhibiting layer includes forming the inhibiting layer on the second conductive layer.

62. (Currently Amended) The method of claim 60, wherein ~~forming the inhibiting layer includes embedding~~ the inhibiting layer is embedded in the second conductive layer.

63. (Canceled)

64. (Currently Amended) The method of claim 60, wherein ~~forming~~ the first conductive layer includes ~~forming the first conductive layer from at least one~~ a conductive metal oxide.

65. (Currently Amended) The method of claim 64, wherein ~~forming~~ the ~~first conductive layer includes forming the first conductive layer from the at least one~~ conductive metal oxide ~~that~~ is selected from a group consisting of ruthenium oxide and iridium oxide.

66. (Currently Amended) A method of forming a semiconductor structure, the method comprising:

forming a first conductive layer, wherein forming the first conductive layer includes forming the first conductive layer from at least one conductive metal oxide, wherein the at least one conductive metal oxide is selected from a group consisting of ruthenium oxide and iridium oxide;

forming an insulation layer abutting the first conductive layer, wherein the insulation layer includes at least one insulator metal oxide;

forming a second conductive layer abutting the insulation layer; and

forming an inhibiting layer abutting the second conductive layer, wherein the inhibiting layer inhibits formation of an undesired oxidation compound so as to enhance an ohmic contact; and

forming a diffusion barrier layer abutting the inhibiting layer.

67. (Currently Amended) The method of claim 66, wherein ~~forming the insulation layer includes forming from the at least one~~ insulator metal oxide ~~that~~ includes ditantalum pentaoxide.

68. (Currently Amended) The method of claim 66, wherein ~~forming the second conductive layer includes forming from at least one~~ a conductive metal oxide.

69. (Currently Amended) The method of claim 68, wherein ~~forming the second conductive layer includes forming from the at least one~~ conductive metal oxide that is selected from a group consisting of ruthenium oxide and iridium oxide.

70. (Currently Amended) The method of claim 66, wherein ~~forming the inhibiting layer includes forming the inhibiting layer from~~ a substance selected from a group consisting of a transition metal, a transition metal alloy, a nitride compound, a noble metal, and a noble metal alloy.

71. (Currently Amended) The method of claim 70, wherein ~~forming the inhibiting layer includes forming from the transition metal that~~ is selected from a group consisting of platinum, rhodium, and tungsten.

72. (Currently Amended) The method of claim 70, wherein ~~forming the inhibiting layer includes forming from the transition metal alloy that~~ includes a platinum rhodium alloy.

73. (Currently Amended) The method of claim 70, wherein ~~forming the inhibiting layer includes forming from the nitride compound that~~ is selected from a group consisting of tungsten nitride and titanium nitride.

74. (Currently Amended) A method of forming a semiconductor structure, the method comprising:

forming a first conductive layer, wherein the first conductive layer comprises at least one conductive metal oxide, wherein the at least one conductive metal oxide is selected from a group consisting of ruthenium oxide and iridium oxide;

forming an insulation layer abutting the first conductive layer, wherein the insulation layer comprises at least one insulator metal oxide, wherein the at least one insulator metal oxide includes ditantalum pentaoxide;

forming a second conductive layer abutting the insulation layer, wherein the second conductive layer comprises at least one conductive metal oxide, wherein the at least one conductive metal oxide is selected from a group consisting of ruthenium oxide and iridium oxide; and

forming an inhibiting layer abutting the second conductive layer, wherein the inhibiting layer comprises a substance selected from a group consisting of a transition metal, a transition metal alloy, a nitride compound, a noble metal, and a noble metal alloy, wherein the transition metal alloy includes a platinum rhodium alloy, wherein the transition metal is selected from a group consisting of platinum, rhodium, and tungsten, [[and]] wherein the nitride compound is

selected from a group consisting of tungsten nitride and titanium nitride, wherein the noble metal is selected from a group consisting of platinum, gold, titanium, and silver, and wherein the noble metal alloy is selected from a group consisting of graphite, chlorimet 3, and hastelloy C; and forming a diffusion barrier layer abutting the inhibiting layer.

75. (Currently Amended) The method of claim 74, ~~further comprising forming a~~ wherein the diffusion barrier abutting to the second includes a ~~conductive layer material.~~

76. (Currently Amended) The method of claim 75, wherein ~~forming a~~ the diffusion barrier includes ~~forming a material selected from a group selected from~~ consisting of a nitride compound, a carbide compound, a boride compound, a transition metal alloy, and a transition metal nitride compound alloy.

77. (Currently Amended) The method of claim ~~[[76]]~~ 75, wherein ~~forming the diffusion barrier includes forming from~~ the nitride compound ~~that~~ includes titanium nitride.

78. (Currently Amended) The method of claim ~~[[76]]~~ 75, wherein ~~forming the diffusion barrier includes forming from~~ the transition metal alloy ~~that~~ includes titanium tungsten.

79. (Currently Amended) The method of claim ~~[[76]]~~ 75, wherein forming the diffusion barrier includes forming from the transition metal nitride compound alloy ~~that~~ includes titanium nitride tungsten.

80. (Currently Amended) A method of forming a semiconductor structure, the method comprising:

forming a first conductive layer, wherein the first conductive layer comprises at least one conductive metal oxide, wherein the at least one conductive metal oxide is selected from a group consisting of ruthenium oxide and iridium oxide;

forming an insulation layer abutting the first conductive layer, wherein the insulation layer comprises at least one insulator metal oxide, wherein the at least one insulator metal oxide includes ditantalum pentaoxide;

forming a second conductive layer abutting the insulation layer, wherein the second conductive layer comprises at least one conductive metal oxide, wherein the at least one conductive metal oxide is selected from a group consisting of ruthenium oxide and iridium oxide;

forming an inhibiting layer abutting the second conductive layer, wherein the inhibiting layer comprises a substance selected from a group consisting of a transition metal, a transition metal alloy, a nitride compound, a noble metal, and a noble metal alloy, wherein the transition metal alloy includes a platinum rhodium alloy, wherein the transition metal is selected from a group consisting of platinum, rhodium, and tungsten, and wherein the nitride compound is selected from a group consisting of tungsten nitride and titanium nitride, wherein the noble metal is selected from a group consisting of platinum, gold, titanium, and silver, and wherein the noble metal alloy is selected from a group consisting of graphite, chlorimet 3, and hastelloy C; and

forming a metallization layer abutting the inhibiting layer, wherein the metallization layer comprises a representative metal, and wherein forming the metallization layer further includes[[:]] forming a diffusion barrier abutting the ~~first conductive layer~~ inhibiting layer, wherein the diffusion barrier comprises a nitride compound, a carbide compound, a boride compound, a transition metal alloy, and a transition metal nitride compound alloy, wherein the nitride compound includes titanium nitride, wherein the transition metal alloy includes titanium tungsten, wherein the transition metal nitride compound alloy includes titanium nitride tungsten.

81. (Currently Amended) The method of claim 80, wherein ~~forming a metallization layer includes forming from the representative metal that~~ includes aluminum.

82. (Original) The method of claim 80, further comprising forming a silicide contact on a substrate.

83. (Canceled)

84. (Currently Amended) The method of claim 80, further comprising:

forming an ohmic contact on a region of a substrate, ~~wherein forming the ohmic contact includes forming the ohmic contact~~ using a technique selected from a group consisting of doping the region of the substrate and forming a refractory metal silicide in the region of the substrate.

85. (Currently Amended) A method of forming a semiconductor structure, the method comprising:

forming an ohmic contact on a region of a substrate;

forming a first conductive layer, wherein the first conductive layer comprises at least one conductive metal oxide, wherein the at least one conductive metal oxide is selected from a group consisting of ruthenium oxide and iridium oxide;

forming a first insulation layer abutting the first conductive layer, wherein the first insulation layer comprises at least one insulator metal oxide, wherein the at least one insulator metal oxide includes ditantalum pentaoxide;

forming a second conductive layer abutting the first insulation layer, wherein the second conductive layer comprises at least one conductive metal oxide, wherein the at least one conductive metal oxide is selected from a group consisting of ruthenium oxide and iridium oxide;

forming an inhibiting layer abutting the second conductive layer, wherein forming the inhibiting layer includes forming the inhibiting layer that includes the execution of a vapor deposition technique, wherein the vapor deposition technique is selected from a group consisting of physical vapor deposition and chemical vapor deposition, wherein the inhibiting layer comprises a substance selected from a group consisting of a transition metal, a transition metal alloy, a nitride compound, a noble metal, and a noble metal alloy, wherein the transition metal alloy includes a platinum rhodium alloy, wherein the transition metal is selected from a group consisting of platinum, rhodium, and tungsten, wherein the nitride compound is selected from a group consisting of tungsten nitride and titanium nitride, wherein the noble metal is selected from a group consisting of platinum, gold, titanium, and silver, and wherein the noble metal alloy is selected from a group consisting of graphite, chlorimet 3, and hastelloy C;

forming a second insulation layer abutting the ~~inhibiting~~ first conductive layer and the ohmic contact; and

forming a metallization layer abutting ~~a diffusion barrier~~, wherein the metallization layer comprises a representative metal, wherein the representative metal includes aluminum, and wherein forming the metallization layer includes[[:]] forming [[the]] a diffusion barrier abutting the ~~inhibiting first conductive~~ layer, wherein forming the diffusion barrier includes exposing the inhibiting layer and the ohmic contact through the second insulation layer, wherein the diffusion barrier comprises a nitride compound, a carbide compound, a boride compound, a transition metal alloy, and a transition metal nitride compound alloy, wherein the nitride compound includes titanium nitride, wherein the transition metal alloy includes titanium tungsten, wherein the transition metal nitride compound alloy includes titanium nitride tungsten.

86. (Currently Amended) The method of claim 85, wherein ~~forming the inhibiting layer~~ ~~includes forming the inhibiting layer~~ is formed on the second conductive layer.

87. (Currently Amended) The method of claim 85, wherein ~~forming the inhibiting layer~~ ~~includes embedding the inhibiting layer~~ is embedded in the second conductive layer.

88. (New) A method comprising:
forming a first capacitor electrode;
forming a capacitor dielectric over the first capacitor electrode;
forming a second capacitor electrode over the capacitor dielectric;
forming an inhibiting layer over the second capacitor electrode; and
forming a metallization layer contacting the inhibiting layer, the metallization layer includes a metal material.

89. (New) A method comprising:
forming a first capacitor electrode;
forming a capacitor dielectric over the first capacitor electrode;
forming a second capacitor electrode over the capacitor dielectric;

forming an inhibiting layer over the second capacitor electrode; and
forming a metallization layer including a barrier layer contacting the inhibiting layer, the barrier layer includes metal material.

90. (New) A method comprising:

forming a first capacitor electrode;
forming a capacitor dielectric over the first capacitor electrode, the capacitor dielectric includes a metal oxide material;
forming a second capacitor electrode over the capacitor dielectric;
forming an inhibiting layer over the second capacitor electrode; and
forming a metallization layer over the inhibiting layer, the metallization layer including a diffusion barrier layer contacting the inhibiting layer, wherein the diffusion barrier layer includes a metal material.